

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:
Andrew D. Ellington *et al.*

Serial No.: 10/687,125

Filed: October 16, 2003

For: IN VITRO SELECTION OF SIGNALING
APTAMERS

Group Art Unit: 1635

Examiner: Whiteman, Brian A.

Atty. Dkt. No.: CLFR:201USD1

Confirmation No.: 8676

CERTIFICATE OF ELECTRONIC SUBMISSION

DATE OF SUBMISSION: December 18, 2006

INFORMATION DISCLOSURE STATEMENT

MS AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

In compliance with the duty of disclosure under 37 C.F.R. § 1.56, it is respectfully requested that this Information Disclosure Statement be entered and the documents listed on attached Form PTO-1449 be considered by the Examiner and made of record. Copies of the listed documents required by 37 C.F.R. § 1.98(a)(2) are enclosed for the convenience of the Examiner.

In accordance with 37 C.F.R. § 1.97(g), (h), this Information Disclosure Statement is not to be construed as a representation that a search has been made, and is not to be construed to be

an admission that the information cited is, or is considered to be, material to patentability as defined in 37 C.F.R. § 1.56(b).

The present Information Disclosure Statement is being filed prior to the receipt of a first Official Action reflecting an examination on the merits, and hence is believed to be timely filed in accordance with 37 C.F.R. § 1.97(b). No fees are believed to be due in connection with the filing of this Information Disclosure Statement, however, should any fees under 37 C.F.R. § 1.16 to 1.21 be deemed necessary for any reason relating to these materials, the Commissioner is authorized to deduct the appropriate fees from Fulbright & Jaworski Deposit Account No.: 50-1212/CLFR:201USD1.

This application is a divisional application of Serial No. 10/014,973, filed October 26, 2001 and is relied upon for an earlier filing date under 35 U.S.C. § 120. In accordance with Rule 37 C.F.R. § 1.98(d) only copies of those documents not previously cited and submitted to the Patent and Trademark Office in prior application Serial No. 10/014,973 are enclosed for the convenience of the Examiner.

Applicants respectfully request that the listed documents be made of record in the present case.

Respectfully submitted,



Travis Wohlers
Reg. No. 57,423
Attorney for Applicants

FULBRIGHT & JAWORSKI L.L.P.
600 Congress Avenue, Suite 2400
Austin, Texas 78701
(512) 474-5201

Date: December 18, 2006

Form PTO-1449 (modified)		Atty. Docket No. CLFR:201USD1	Serial No. 10/687,125
List of Patents and Publications for Applicant's		Applicant Andrew Ellington <i>et al.</i>	
INFORMATION DISCLOSURE STATEMENT		Filing Date: October 16, 2003	Group: 1635
(Use several sheets if necessary)			
U.S. Patent Documents <i>See Page 1</i>	Foreign Patent Documents <i>See Page 1</i>	Other Art <i>See Page 2-3</i>	

U.S. Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Name	Class	Sub Class	Filing Date of App.
	A1	5,445,935	08/29/95	Royer	435	6	11/23/92
	A2	5,631,146	05/20/97	Szostak <i>et al.</i>	435	91.1	01/19/95
	A3	5,641,629	06/24/97	Pitner <i>et al.</i>	435	6	01/20/95
	A4	5,650,275	06/22/97	Pitner <i>et al.</i>	435	6	07/18/94
	A5	5,691,145	11/25/97	Pitner <i>et al.</i>	435	6	08/27/96
	A6	5,728,525	03/17/98	Conrad	435	6	06/02/95
	A7	5,849,489	12/15/98	Heller	435	6	08/23/96
	A8	5,866,670	02/02/99	Nakai <i>et al.</i>	528	234	08/15/96
	A9	5,989,823	11/23/99	Jayasena <i>et al.</i>	435	6	11/18/98
	A10	6,242,246	06/05/01	Gold <i>et al.</i>	435	287.1	12/15/97
	A11	6,399,302	06/04/02	Lannigan <i>et al.</i>	435	6	08/20/99
	A12	6,426,409	07/30/02	Winnacker <i>et al.</i>	536	23.1	10/25/96
	A13	6,531,286	03/11/03	Jayasena <i>et al.</i>	435	6	07/17/01
	A14	6,680,377	01/20/04	Stanton <i>et al.</i>	536	22.1	05/12/00

Foreign Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Country	Language
	B1	EP 0747706	12/11/96	Europe	English
	B2	WO 01/57259	08/09/01	WIPO	English
	B3	WO 98/27104	06/25/98	WIPO	English
	B4	WO 99/31276	06/24/99	WIPO	English

25702614.1

EXAMINER:

DATE CONSIDERED:

EXAMINER: INITIAL IF REFERENCE CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPPE609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED. INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.

Form PTO-1449 (modified)		Atty. Docket No. CLFR:201USD1	Serial No. 10/687,125
List of Patents and Publications for Applicant's		Applicant Andrew Ellington <i>et al.</i>	
INFORMATION DISCLOSURE STATEMENT		Filing Date: October 16, 2003	Group: 1635
(Use several sheets if necessary)			
U.S. Patent Documents <i>See Page 1</i>	Foreign Patent Documents <i>See Page 1</i>	Other Art <i>See Page 2-3</i>	

Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
	C1	Burke <i>et al.</i> , "RNA Aptamers to the Adenosine Moiety of S-Adenosyl Methionine: Structural Inferences form Variations on a Theme and the Reproducibility of SELEX," <i>Nucleic Acids Research</i> , 25:2020-2024, 1997.
	C2	Davis <i>et al.</i> , "Staining of Cell Surface Human CD4 with 2'-F-Pyrimidine-Containing RNA Aptamers for Flow Cytometry," <i>Nuc. Acids Res.</i> , 26:3915-3924, 1998.
	C3	Davis <i>et al.</i> , "Use of a High Affinity DNA Ligand in Flow Cytometry," <i>Nuc. Acids Res.</i> , 24:702-706, 1996.
	C4	Ellington <i>et al.</i> , "Combinatorial Methods: Aptamers and Aptazymes," <i>Proc. SPIE-Int. Soc. Opt. Eng.</i> , 3858:126-134, 1999.
	C5	Famulok <i>et al.</i> , "Aptamers as Tools in Molecular Biology and Immunology," <i>Curr. Top. Microbiol. Immunol.</i> , 243:123-136, 1999.
	C6	Famulok <i>et al.</i> , "Oligonucleotide Libraries - Varatio Delectat," <i>Curr. Opin. Chem. Biol.</i> , 2:320-327, 1998.
	C7	Geiger <i>et al.</i> , "RNA Aptamers that Bind L-Arginine with Sub-Micromolar Dissociation Constants and High Enantioselectivity," <i>Nuc. Acids Res.</i> , 24:1029-1036, 1996.
	C8	German <i>et al.</i> , "Aptamers as Ligands in Affinity Probe Capillary Electrophoresis," <i>Anal. Chem.</i> , 70:4540-4545, 1998.
	C9	Gold <i>et al.</i> , "Diversity of Oligonucleotide Functions," <i>Annu. Rev. Biochem.</i> , 64:763-797, 1995.
	C10	Guillano <i>et al.</i> , "Fluorescent-Protein Biosensors: New Tools for Drug Discovery," <i>Trends Biotechnol.</i> , 16:135-140, 1998.
	C11	Hesselberth <i>et al.</i> , "In Vitro Selection of Nucleic Acids for Diagnostic Applications," <i>Reviews in Molecular Biotechnology</i> , 74:15-25, 2000.
	C12	Huizenga <i>et al.</i> , "A DNA Aptamer that Binds Adenosine and ATP," <i>Biochemistry</i> , 34:656-665, 1995.
	C13	Jayasena, "Aptamers: An Emerging Class of Molecules that Rival Antibodies in Diagnostics," <i>Clin. Chem.</i> , 45:1628-1650, 1999.
	C14	Jhaveri <i>et al.</i> , "Designed Signaling Aptamers that Transduce Molecular Recognition to Changes in Fluorescence Intensity," <i>American Chemical Society</i> , 122:2469-2473, 2000.

25702614.1

EXAMINER:

DATE CONSIDERED:

EXAMINER: INITIAL IF REFERENCE CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED. INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.

Form PTO-1449 (modified)		Atty. Docket No. CLFR:201USD1	Serial No. 10/687,125
List of Patents and Publications for Applicant's		Applicant Andrew Ellington <i>et al.</i>	
INFORMATION DISCLOSURE STATEMENT		Filing Date: October 16, 2003	Group: 1635
(Use several sheets if necessary)			
U.S. Patent Documents <i>See Page 1</i>	Foreign Patent Documents <i>See Page 1</i>	Other Art <i>See Page 2-3</i>	

Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
	C15	Jhaveri <i>et al.</i> , "In vitro selection of phosphorothiolated aptamers," <i>Nature Biotechnology</i> , 18:1293-1297, 2000.
	C16	Kawazoe <i>et al.</i> , "Extended in vitro selection for the synthesis of novel molecular recognition oligonucleotide derivatives," <i>Nucleic Acids Symposium Series</i> , 42:177-178, 1999.
	C17	Morris <i>et al.</i> , "High Affinity Ligands from <i>In Vitro</i> Selection: Complex Targets," <i>Proc. Natl. Acad. Sci. USA</i> , 95:2902-2907, 1998.
	C18	Osborne <i>et al.</i> , "Aptamers as Therapeutic and Diagnostic Reagents" Problems and Prospects," <i>Curr. Opin. Chem. Biol.</i> , 1:5-9, 1997.
	C19	Patel <i>et al.</i> , "Structure, Recognition and Adaptive Binding in RNA Aptamer Complexes," <i>J. Mol. Biol.</i> , 272:645-664, 1997.
	C20	Potyrailo <i>et al.</i> , "Adapting Selected Nucleic Acid Ligands (Aptamers) to Biosensors," <i>Anal. Chem.</i> , 70:3419-3425, 1998.
	C21	Rogers <i>et al.</i> , "A Ribozyme that Lacks Cytidine," <i>Nature</i> , 402:323-325, 1999.
	C22	Sassanfar <i>et al.</i> , "An RNA Motif that Binds ATP," <i>Nature</i> , 364:550-553, 1993.
	C23	Westhof <i>et al.</i> , "From Self-Assembly to Induced-Fit Recognition," <i>Curr. Opin. Struct. Biol.</i> , 305-309, 1997.
	C24	Wiederholt <i>et al.</i> , "Oligonucleotides tethering Hoechst 33258 derivatives: effect of the conjugation site on duplex stabilization and fluorescence properties," <i>Bioconjug Chem.</i> , 8:119-126, 1997.
	C25	Wolfs <i>et al.</i> , "Conformational changes in oligo-nucleotides upon binding to a peptide representing the N-terminal region of a viral coat protein. An optical spectroscopy study," <i>Biochim Biophys Acta</i> , 1172:1-4, 1993.

25702614.1

EXAMINER:

DATE CONSIDERED:

EXAMINER: INITIAL IF REFERENCE CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED. INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.